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ABSTRACT

A two and one-half year financial health analysis study was conducted of the involvement of the United Methodist Church in higher education through its more than 100 related colleges. A description is provided of the approach to identifying the following information: institutions likely to survive with or without any help or policy changes from the church; institutions in trouble but who might be helped by policies that could include financial support; and institutions whose chances of survival appear hopeless. Exploratory data analyses included using the dot matrix approach, cluster analysis, and principle components analysis. The adopted scheme made it possible to indicate relative positions across multiple indicators in a single score value. Fourteen indicators were chosen and categorized into variables that were logically related to short-term and long-term issues. The development and analysis of the scale are described, and the results are presented in a six and one-half page statistical table. (SW)

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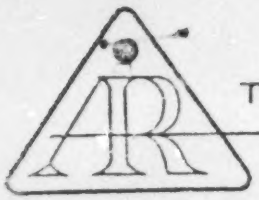

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AN EXPERIENCE IN FINANCIAL HEALTH ANALYSIS IN HIGHER EDUCATION

T. Michael Elliott

1978 Forum of the Association for Institutional Research
Houston, Texas

Introduction

My objective here today is to describe for you an experience in financial health analysis. This is not a case study in any rigorous sense of that term but simply a method to describe for you rather informally why we did what we did, what it was that we did and the reactions and consequences of the analysis.

The most general question is why study financial health at all. There are many reasons why one might wish to engage in this kind of study. As academic types, we're interested in the search for truth, the "pure" research motivation. Alternatively, we may wish to establish "the facts" as a basis for policy, either institutional or public policy. We may be seeking a means of prediction: who will survive and who will not? We may be interested in establishing a diagnostic procedure so that we may identify problems with the intent of curing those problems. Or, I suppose, we could just be possessed by curiosity, wishing to probe and tinker with the bones and organs of institutions of higher education.

The intentions of the experience I'm describing here today grew from the nature of the charge to our organization, and our perspective on the environment for independent higher education, so I must digress for a moment to explain that context. The National Commission on United Methodist Higher Education was a temporary policy research organization, completely funded by the United Methodist Church. The church provided us with $750,000 to conduct a two and one-half year study of its involvement

in higher education through its more than 100 related colleges. Beyond that support and charge, the work of the National Commission was not subject to the direction or supervision of the church or any of its offices. Some portions of our study were concerned with features unique to the United Methodist system, but most were generally applicable to all independent institutions.

As we looked at our tasks we knew we had to identify means of coping with an environment which seemed fairly hostile to independent institutions. Yet, we did not want to overemphasize the negative. In almost every discussion of higher education, concern is expressed over the significant distress being experienced by the independent sector institutions due to declining enrollments, tightening finances, or whatever. The major studies of the status of independent higher education tell the story in their titles: At the Crossroads, The Turning Point, The New Depression, The Red and the Black, From Red to Black, To Turn the Tide. Before I had really thought about that literature of doom I added to the literature the title Endangered Service with one of the early volumes of the commission research. To the extent that this gloom and doom oriented analysis and forecasting dominates our thinking it is clearly dysfunctional; yet we cannot deny that a situation is evolving in which very significant distress is going to be experienced by independent higher education, a distress unlike that chronicled or experienced to date. Without going into the specific demographic and economic factors which will contribute to this distress, well known to all of you here, suffice it to say that the future will no doubt be one which will include fewer independent institutions. Therefore, in considering the future, we had to consider the possibility of closings within our group of institutions. Closings, we found, were typically characterized by chaos more than anything else. In futile attempts to survive, institutions hold on until the last moment, dissipating whatever assets they may have and finally collapse when they can just no longer meet the payroll. This results in persons being abused, including most especially students and staff, but also including the sponsors of the institutions. With the total dissipation of assets, there typically is little left to salvage to reinvest in

other institutions. It was in this context, seeking to avoid that kind of outcome, that we began our study. Always guiding our effort, however, was the need to conduct our analyses and present the results in ways that could be understood by laymen, Board members, and presidents, and our sensitivity that if we were not very careful our work could become the basis of self-fulfilling prophecies.

Basically, we took a kind of triage approach. We wanted to identify those institutions who, it appeared, would clearly make it, with or without any help or policy changes on the part of the church. Secondly, we sought to identify those institutions who were in trouble but who might be helped through specific, intentional policies, including, but not limited to, financial support, to survive. Finally, we wanted to identify those institutions where chances for survival appeared to be hopeless. In those cases we wanted to identify a means of easing the passing of the institutions so that it could occur with some dignity. Instead of the closing marking a failure we thought that we could show how it could become a celebration of a mission achieved, that we could identify means to deal in an organized way with the needs of students and staff of the institutions, and could conserve a larger portion of the assets of such institutions for reinvestment in the system before they were dissipated in a futile effort to survive. Before I go on and describe our approach to financial health analysis, let me note that we did produce a paper on a technique for closing a college which will soon be published. There we tried to chart a step by step approach to the many kinds of details that must be cared for in such a procedure.

I should also remove any suspense and note that our financial health analysis did not succeed in clearly identifying those three sets of institutions. We tried several avenues of research, but were largely frustrated. The measures that are analogous to profit sector organizations seem sometimes imprecise or, worse, misleading when applied to non-profit organizations. Further, there are clearly factors operating in the continued survival of institutions that are simply not revealed in the current state of the art of financial health analysis. For example, how can an institution run a current fund deficit equal to 50 percent of

its operating budget and keep going? But one has, for four years, and its current fund negative balance continues to grow, but somehow it keeps on. Or how can another institution whose asset/liability ratios indicate that it could only pay about seven cents on the dollar operate? But it does. Every measure that we identified which seemed as if it might be useful as a predictor had logic, but many exceptions.

Analytic Process

Our basic technique was exploratory data analysis, perhaps better characterized as data snooping. Early on, we shifted from measuring health to measuring distress, or more specifically patterns of distress. Clearly, any single variable could not be a definitive indicator. An institution may exhibit a "low" or "distress" value on any one variable, but in fact, be very healthy. It is possible to describe a scenario in which almost any "bad" variable value can validly be explained away. However, those institutions which have a pattern of distress (or health) across most relevant variables allow firmer conclusions. Our question then was how to describe such patterns. One method was the dot matrix. We simply arrayed across the top of a matrix a number of indicators or measures as column headers. As the row headers we listed the institutions. Then in each cell we placed a dot for an institution whose value on the given indicator exceeded the threshhold we identified as suggesting distress. Thus, an institution with dots in most or all of the variable columns could reasonably be described as exhibiting a pattern of distress. Other institutions, exhibiting dots in only one or two columns, were recognized as basically healthy institutions. Those dots that were present in such instances could either be special circumstances which could be explained or, possibly, were early warning signals of future problems.

While the dot matrix approach was a substantial improvement over univariate methods, it retained several problems. First, definition of the threshhold values was, for most variables, necessarily arbitrary. Some variables lend themselves to logical threshhold values, but for many logical

threshholds do not exist and arbitrary values must be utilized. Such arbitrary values can be generated in rational ways, but leave the analysis subject to manipulation. That is, it was possible to manipulate which institutions appeared to be distressed and which did not by the specification of the threshhold values. The second problem of the dot matrix approach was that it masked substantial variation among institutions. Among the institutions falling below the threshhold value, some were barely below that value while others fell greatly below. Two institutions with unrestricted fund ratios of .1 and .9 both fall below the threshhold value of 1.0. Clearly, however, the institution with the value of .1 is in much greater distress than the institution whose ratio is .9. Similarly, an institution whose ratio value is 2.0 is much better off than the institution whose value is 1.01. The dot matrix approach merely recorded that neither of the latter two institutions fell below the threshhold. For these reasons, efforts were made to find other approaches.

A multivariant statistical technique known as cluster analysis was tried briefly as a means of identifying the triage groups with inconclusive results. A special case of factor analysis, known as principle components analysis, was tried as a means of obtaining a single health "score," with initial indications of substantial promise. Ultimately, however, the results yielded proved to be intuitively illogical. Finally, a scheme was devised whereby it was possible to indicate relative positions across multiple indicators in a single score value. Our work started with more than 50 variables or measures gleaned from the literature initially, but we quickly pared that down to 32 for the statistical analyses described above. Our initial work focused on utilizing all or subsets of the variables to develop a single composite score. In the end, we noted that many of the variables were highly intercorrelated and seemed likely to be measuring essentially the same kind of trait. We therefore finally chose 14 indicators, and categorized those into variables that were logically short-term indicators and those that were logically related more to long-term issues. The choice of indicators was unapologetically

subjective, based on the judgments of our staff after spending a great deal of time working with the data and having many conversations with institutional officials regarding the interpretation of various measures.

For each variable utilized, the values for all institutions were calculated for a given year and the scores then arrayed in rank order. The population was then subdivided into decile groups. The institutions falling into the lowest decile group were assigned a scale value for that variable of 0. The next highest decile was assigned a scale of 1, etc., with the top decile receiving the scale value of 9. A similar procedure was followed for each variable. The scale values for each institution were then summed across all of the variables. An institution which ranked in the lowest decile on each of 10 variables would thus have a total score of 0. An institution which ranked in the top decile across those same 10 variables would have a total score of 90. Patterns of health or distress across the several variables would be reflected in scores between those limits.

In addition to more accurately portraying interinstitutional variance, this method allowed variables to be weighted according to their perceived significance. That is, while two variables may both logically be described as reasonable indicators of short-term financial health, one may be more critical than the other. In such a case the analyst may arbitrarily assign a weight to the more important variable so that it becomes twice or three times as important as the other in the calculation. Thus, a ranking in the fourth decile (from the bottom) on a variable with a scale value of 3 will result in the same number of scale points as placing in the top decile on a variable with a scale value with the weight of 1. Double weights were used for some variables in sample analyses. However, the weightings were necessarily arbitrary, being based solely on what seemed to us to be the most critical variables. When the index was recalculated with all variables having the same weight, the resulting indices, though somewhat altered, were essentially similar to the results using the double weights. Thus, in order to simplify the process, and avoid controversy over weightings, all variables in the analysis were weighted equally.

Short-Term Financial Health

A total of 8 variables were utilized to form the composite short-term financial health index. They were:

1. Ratio of unrestricted current assets to unrestricted current liabilities.

2. Total unrestricted current fund balance expressed as a percentage of the total current expenditure budget of the institution.

3. The total current income of the institution as a percent of total current expenditures.

4. Interfund borrowing expressed as a percent of total assets.

5. Total liabilities expressed as a percent of educational and general expense.

6. Endowment earnings as a percentage of educational and general expenditures.

7. Unsupported student aid as a percentage of tuition income.

8. A five-year percentage change in full-time equivalent enrollment.

Although many other indicators were analyzed, these seemed to be the most useful in terms of discriminating among institutions. The maximum raw score on the short-term index was 72 (8x9).

Long-Term Financial Health

Six indicators were utilized as components of the long-term financial health index. They were:

1. Ratio of endowment principle to total current expenditures.

2. Ratio of non-plant assets to total liabilities.

3. Net assets to total liabilities ratio.

4. The equity percentage of the institutions, or the percent of the total assets represented by the total fund balance.

5. The total current income as a percent of total assets, an analogue to return on investments.

6. Plant debt as a percentage of investment in plant.

Again, a number of the indicators were examined but these six seemed to provide the most informative analysis. The maximum raw score long-term health index was 54 (6x9).

Scale Development

The actual results for a given year were not necessarily ranged between the theoretical low and high values. That is, while theoretically scores on the short-term index could range from 0 to 72, actual scores may be distributed across a somewhat narrower range of, say, 11 to 60, and this range would likely vary from year to year. Further, because the potential raw score values of the long-term index (maximum 54) were somewhat less than potential scores on the short-term index, comparison of relative position across the two indices was difficult. For these reasons, both indices were artificially scaled to the range of 0 to 10.0 for each year. That is, the lowest short-term score in each year was assigned the value of 0 and the highest assigned the value of 10 and all the other scores were then adjusted proportionately across that new range so that they maintained the same relative positions with respect to the new minimum and maximum scores. The result is that the orders of magnitude of the scores across time and across indices are comparable.

Analyses

Table 1 displays the results of financial health analysis for the total sample of institutions across a five-year period. Note that institution 676 has substantially improved its short-term financial position across the five years. However, its long-term position has remained effectively stable. Because both the short-term and long-term scale values vary from 0 to 10 one may see that the short-term position seems logically much better than the relatively long-term position. As it happens, institution 676 is one of the historically black colleges which receives substantial annual support from the Black College Fund of the United Methodist Church. This annual infusion of cash, in a sense unearned income not available to other institutions, has allowed substantial improvement in the short-term financial picture of the institution. However, note that this cash has had apparently little effect on the relative long-term position of the institution which remains rather low. Institution 530, on the other hand, has suffered erosion in its short-term position. The decline is small enough that its condition could reasonably still be described as relatively good. On the other hand, this stability has apparently been purchased at the cost of substantial erosion of the institution's long-term health picture. Institution 544 displayed a rather different pattern. Its long-term health has been very precarious since the beginning of the analysis and has continued to erode. The validity of the long-term index is apparently supported by the rapid deterioration apparent in the short-term index from the first year to the last. This pattern is contrasted with that of institution 550 whose short-term position, while not at the top of the scale, has improved somewhat across time and whose long-term position exhibits substantial improvement. Quite likely, this institution has been able to maintain a stable current budget picture while systematically eliminating its debt and increasing its endowment or other long-term assets. Similar interpretations can be made for the other institutions in the analysis. The important point to remember is that these indices are not absolute measures, but relative indicators of position among the 102 institutions for whom data were available.

Uses of the Data

When we had completed this analysis we put this information together with everything else we knew about the institutions, and reviewed the data with our National Commission. We went through several reiterations of having each member of the commission categorize the institutions, using all the information available to them, in one of the three triage categories referred to earlier. The initial rankings were compared, and discussed. Points of disagreement were explored, and then the whole process repeated. Through this sort of informal, modified delphi-technique we eventually came to the conclusion that there were 22 of the 102 institutions which face severe hardship. The questions then became "If we now know this, what do we do with it? Who do we tell?"

Throughout the analysis the more we learned the more we became convinced that we could not know anything with certainty. The exceptions abound. The intangible factors regarding an institution's tenacity to survive were largely unmeasured. Yet, the patterns of distress in these 22 institutions seemed unmistakable. In the end, we decided to tell the church agency responsible for coordinating the church involvement with the institutions and the institutions themselves. The Chronicle had been following our study, expecting us to publicly identify a list of institutions which we would suggest be closed. We did not do that, and our refusal to identify the 22 institutions caused considerable consternation. The church received the information with some gravity, with officials stating that the research would be seriously examined and appropriate corrective measures implemented.

The most interesting, and varied, responses came from the institutions. I recall one president was contacted by a reporter to determine whether or not his institution was on the list of 22. Reflecting on the problems he was confronting, he replied that no it was not, but that it should have been. The most common reaction, from institutions on the list, was anger. Several presidents lashed out at the National Commission and myself for daring to suggest that everything was not going well at their

institution. They were intensely fearful that if the fact that their institution was included in the 22 became known their already difficult jobs of fund raising in the hand-to-mouth existence they lead would be made impossible. One institution, not among those identified as most endangered, was nevertheless offended that we would deign to make such a judgment, and threatened disaffiliation with the denomination. More encouragingly, many presidents, on and off the list, called to express their gratitude for the analysis and request further help in understanding what we had done and in communicating that understanding to their boards. It was probably those few who were most helped by the analysis, although many other institutions, not labeled as most endangered, have, I think, gained new insights into their own operation through these analyses, and look forward to the continuing reports.

Although the National Commission was a temporary project, and has now been dismantled, and I have moved on to a different position, I have retained a one-year research grant with the Methodists to update that analysis with two more years' data. I am in the midst of that analysis now, and hope that we may publish a report of the updated analysis late this summer. While at this stage incomplete, my preliminary examination of much of the data suggests that things haven't changed very much in the succeeding two years. The institutions in the most precarious positions seem to have continued to grow worse, but none have as yet collapsed. In the few instances where the commission made decisions based on information known to them but not yet reflected in the data we then had, the current data seem to verify those judgments. When we finish the analysis this year, I honestly do not know what will happen. I believe that many of the institutions hope that the research will be continued, but the church is straining to support the inquiry.

Looking back on it I can report to you that the analysis of financial health of institutions of higher education is certain to be one of the most frustrating problems any researcher can attempt to understand. At the same time, I recommend it to you as a fascinating field, yet embryonic

in its development, and one in which I look forward to the continued contributions of John and Hans and others. Someday we may be able to get down to the real bottom line or lines; I'm sure they're there, but I don't think we've found them as yet.

TABLE 1. SHORT AND LONG TERM RELATIVE FINANCIAL HEALTH INDICES, 1970-71 THROUGH 1974-75

Inst. Code	Type Code	Scale	1970-71	1971-72	1972-73	1973-74	1974-75	Change
502	4	Short Term	4.8	6.0	4.7	6.4	7.3	+2.5
		Long Term	2.9	3.5	3.3	4.2	3.9	+1.0
504	4	Short Term	7.2	7.0	6.0	7.5	6.2	-1.0
		Long Term	5.0	5.0	4.6	4.8	5.1	+.1
512	2	Short Term	8.5	8.2	7.8	8.5	7.9	-.6
		Long Term	6.9	7.3	6.9	6.5	6.7	-.2
513	4	Short Term	1.7	3.8	3.1	2.9	2.0	+.3
		Long Term	3.5	3.7	4.0	3.7	3.3	-.2
517	4	Short Term	6.7	6.8	6.2	6.4	6.8	+.1
		Long Term	4.0	4.0	4.4	4.8	4.7	+.7
519	2	Short Term	5.4	8.0	7.6	7.8	8.0	+2.6
		Long Term	6.0	6.5	6.2	6.7	6.5	+.5
529	4	Short Term	3.7	4.2	3.3	4.9	5.0	+1.3
		Long Term	2.1	2.3	1.9	2.3	2.2	+.1
530	1	Short Term	8.9	8.0	7.8	6.9	7.3	-1.6
		Long Term	6.7	6.5	6.7	6.5	4.9	-1.8
533	5	Short Term	2.4	2.4	1.9	1.9	1.6	-.8
		Long Term	9.2	8.7	8.5	7.9	7.1	-2.1
540	4	Short Term	9.3	8.4	9.1	9.5	10.0	+.7
		Long Term	9.4	7.9	7.7	8.3	8.4	-1.0
544	5	Short Term	7.8	5.6	5.7	4.6	2.1	-5.7
		Long Term	1.2	1.2	.8	.8	.8	-.4
547	4	Short Term	5.0	3.4	4.1	3.6	2.7	-2.3
		Long Term	6.7	6.2	7.1	7.3	6.3	-.4
549	4	Short Term	8.3	7.4	6.6	5.1	5.2	-3.1
		Long Term	9.4	9.2	9.2	9.2	9.2	-.2
550	2	Short Term	6.1	6.8	5.5	7.8	7.1	+1.0
		Long Term	5.4	5.8	6.5	8.7	9.0	+3.6
554	3	Short Term	6.7	5.8	6.2	6.3	6.8	+.1
		Long Term	5.0	6.0	5.6	5.6	5.7	+.7
561	1	Short Term	7.4	7.6	6.9	6.6	5.2	-2.2
		Long Term	4.8	5.0	5.4	5.8	5.3	+.5

TABLE 1. (Continued)

Inst. Code	Type Code	Scale	1970-71	1971-72	1972-73	1973-74	1974-75	Change
562	1	Short Term	9.3	8.4	7.9	7.8	8.0	-1.3
		Long Term	10.0	10.0	10.0	9.6	9.4	-.6
567	4	Short Term	5.2	5.8	5.2	4.7	3.7	-1.5
		Long Term	8.3	8.3	9.2	9.0	8.6	+.3
574	4	Short Term	5.0	5.0	4.7	4.9	5.2	+.2
		Long Term	5.6	5.0	5.2	5.0	4.9	-.7
580	4	Short Term	6.3	4.6	3.8	6.9	3.7	-2.6
		Long Term	0	0	0	0	0	0
581	1	Short Term	4.3	5.4	5.7	5.9	5.0	+.7
		Long Term	5.8	6.0	6.7	7.5	7.1	+1.3
587	3	Short Term	6.3	6.4	5.5	6.4	6.1	-.2
		Long Term	3.5	3.7	3.5	2.7	2.4	-1.1
590	4	Short Term	4.3	5.4	5.2	5.3	4.8	+.5
		Long Term	1.7	2.1	2.5	2.5	3.3	+1.6
591	2	Short Term	5.7	5.0	5.3	4.6	5.7	0
		Long Term	6.0	6.0	6.2	6.2	6.9	+.9
592	4	Short Term	3.5	2.0	1.6	1.4	2.0	-1.5
		Long Term	4.4	4.0	4.0	3.7	3.9	-.5
597	4	Short Term	.9	0	1.0	0	0	-.9
		Long Term	2.1	1.7	2.3	2.1	2.2	+.2
598	4	Short Term	7.0	6.8	5.2	3.7	3.0	-4.0
		Long Term	6.2	6.5	6.5	5.6	5.9	-.4
599	4	Short Term	3.5	4.2	4.8	4.7	6.1	+2.6
		Long Term	7.1	7.3	7.5	6.9	7.3	+.2
601	5	Short Term	10.0	8.8	7.9	6.8	6.2	-3.8
		Long Term	9.2	9.4	9.4	9.4	9.2	0
606	4	Short Term	N/A	N/A	N/A	N/A	N/A	N/A
		Long Term	N/A	N/A	N/A	N/A	N/A	N/A
613	3	Short Term	1.3	3.4	2.9	3.6	3.2	+1.9
		Long Term	8.5	9.2	9.0	9.2	9.0	+.5
614	2	Short Term	2.0	3.0	2.6	4.6	5.7	+3.7
		Long Term	4.2	4.2	4.2	4.4	4.9	+.7

TABLE 1. (Continued)

Inst. Code	Type Code	Scale	1970-71	1971-72	1972-73	1973-74	1974-75	Change
615	4	Short Term	8.9	8.8	8.3	8.3	9.5	+.6
		Long Term	8.5	9.0	9.2	9.6	9.6	+1.1
619	5	Short Term	6.1	6.6	9.1	10.0	8.0	+1.9
		Long Term	8.5	8.7	9.0	9.2	8.8	+.3
622	4	Short Term	6.5	4.2	5.9	4.4	1.2	-5.3
		Long Term	7.5	7.5	7.7	7.5	6.1	-1.4
627	4	Short Term	2.0	.6	0	2.2	.4	-1.6
		Long Term	2.5	2.5	2.3	2.9	2.2	-.3
628	4	Short Term	7.0	7.8	7.6	7.8	7.7	+.7
		Long Term	8.3	8.5	8.5	8.5	8.6	+.3
630	4	Short Term	6.7	9.6	9.3	8.3	7.9	+1.2
		Long Term	6.7	8.1	8.3	7.1	8.0	+1.3
631	5	Short Term	4.6	6.8	6.6	6.8	5.9	+1.3
		Long Term	6.2	6.2	7.1	7.1	6.9	+.6
634	4	Short Term	N/A	3.2	1.6	1.4	2.0	-1.1
		Long Term	N/A	1.0	.8	1.0	1.6	+.6
635	1	Short Term	7.6	8.2	6.6	7.5	8.9	+1.3
		Long Term	10.0	9.8	9.6	10.0	10.0	0
639	4	Short Term	.4	1.0	1.9	1.5	1.8	+1.4
		Long Term	1.7	1.7	2.5	3.1	3.1	+1.4
644	2	Short Term	8.5	7.8	7.8	6.6	6.8	-1.7
		Long Term	6.9	5.4	6.0	5.2	5.3	-1.6
646	4	Short Term	5.0	4.2	3.1	2.9	1.1	-3.9
		Long Term	.4	.6	.6	.4	.4	0
647	4	Short Term	0	2.8	2.6	3.7	4.1	+4.1
		Long Term	4.0	4.4	4.2	5.0	6.1	+2.1
652	4	Short Term	5.4	6.2	5.3	6.1	3.6	-1.8
		Long Term	7.5	6.9	7.5	7.5	7.3	-.2
654	4	Short Term	4.1	3.6	3.3	3.6	2.3	-1.8
		Long Term	5.8	5.0	4.8	5.0	4.5	-1.3
655	4	Short Term	7.0	6.4	5.2	6.6	6.2	-.8
		Long Term	7.7	7.9	6.9	6.9	6.9	-.8

TABLE 1. (Continued)

Inst. Code	Type Code	Scale	1970-71	1971-72	1972-73	1973-74	1974-75	Change
659	5	Short Term	N/A	N/A	N/A	N/A	N/A	N/A
		Long Term	N/A	N/A	N/A	N/A	N/A	N/A
666	5	Short Term	8.9	8.8	7.2	5.6	5.7	-3.2
		Long Term	6.0	6.7	3.7	2.7	2.7	-3.3
667	4	Short Term	4.3	5.2	4.8	6.4	5.5	+1.2
		Long Term	8.3	8.3	8.3	8.5	8.8	+.5
669	4	Short Term	5.4	6.2	5.3	5.8	6.4	+1.0
		Long Term	7.3	7.9	7.1	7.7	7.8	+.5
676	4	Short Term	4.1	5.4	3.6	5.6	7.0	+2.9
		Long Term	2.5	2.7	2.1	2.1	2.4	-.1
679	4	Short Term	3.3	2.8	1.7	2.9	1.6	-1.7
		Long Term	4.8	4.8	4.8	4.4	4.5	-.3
681	4	Short Term	5.9	5.4	3.4	5.6	3.6	-2.3
		Long Term	2.7	2.7	2.9	3.3	3.7	+1.0
682	4	Short Term	2.4	3.4	3.1	3.4	3.6	+1.2
		Long Term	3.1	4.4	3.5	3.5	3.9	+.8
687	5	Short Term	5.0	4.0	4.1	4.4	4.8	-.2
		Long Term	9.4	9.6	7.9	7.1	4.7	-4.7
692	5	Short Term	7.6	6.6	4.5	5.1	3.6	-4.0
		Long Term	4.6	4.4	4.0	2.7	3.5	-1.1
694	4	Short Term	5.0	3.2	3.6	4.1	4.5	-.5
		Long Term	6.9	6.5	6.5	6.2	6.3	-.6
695	2	Short Term	3.0	3.2	2.8	3.1	3.2	+.2
		Long Term	3.3	3.5	2.3	2.3	2.2	-1.1
698	2	Short Term	8.9	8.8	8.1	7.3	7.5	-1.4
		Long Term	9.0	9.2	9.6	9.0	8.2	-.8
699	4	Short Term	1.7	4.0	5.0	4.1	3.2	+1.5
		Long Term	8.5	9.2	9.4	9.2	8.4	-.1
702	4	Short Term	8.7	8.2	7.8	9.2	6.4	-2.3
		Long Term	9.0	9.2	9.2	9.2	9.2	+.2
712	4	Short Term	2.4	5.8	4.8	6.3	3.0	+.6
		Long Term	2.7	3.5	4.2	4.6	3.3	+.6
725	5	Short Term	7.2	6.6	6.0	6.3	3.9	-3.3
		Long Term	3.7	3.1	3.1	3.1	2.4	-1.3

TABLE 1. (Continued)

Inst. Code	Type Code	Scale	1970-71	1971-72	1972-73	1973-74	1974-75	Change
737	2	Short Term	6.1	6.2	5.0	5.3	6.2	+.1
		Long Term	8.1	7.5	8.1	7.9	8.2	+.1
740	2	Short Term	6.3	6.8	5.9	7.5	7.1	+.8
		Long Term	4.8	5.6	5.4	6.2	5.9	+1.1
741	3	Short Term	4.3	5.4	5.2	5.1	4.5	+.2
		Long Term	6.5	6.5	6.7	6.9	6.3	-.2
750	1	Short Term	2.4	4.4	4.1	4.1	3.7	+1.3
		Long Term	3.1	2.9	3.1	2.3	2.4	-.7
751	5	Short Term	5.9	4.0	4.1	5.9	5.2	-.7
		Long Term	1.9	2.3	2.5	2.7	2.7	+.8
761	4	Short Term	5.4	6.8	6.6	8.3	7.0	+1.6
		Long Term	2.5	2.7	2.5	2.5	2.7	+.2
762	1	Short Term	9.1	7.6	6.6	6.6	7.3	-1.8
		Long Term	5.2	5.2	4.6	4.4	4.3	-.9
770	4	Short Term	5.0	5.2	7.8	7.5	7.5	+2.5
		Long Term	6.0	6.7	7.5	7.3	7.8	+1.8
773	5	Short Term	7.8	10.0	10.0	9.5	8.0	+.2
		Long Term	7.3	8.1	8.1	9.0	9.0	+1.7
774	5	Short Term	3.0	4.6	4.7	4.7	2.3	-.7
		Long Term	5.6	6.0	5.6	6.2	5.1	-.5
780	5	Short Term	4.8	4.6	4.3	4.2	4.6	-.2
		Long Term	1.0	1.0	1.2	1.5	1.6	+.6
784	2	Short Term	4.3	3.8	4.0	4.1	3.6	-.7
		Long Term	4.8	4.2	4.6	4.8	4.7	-.1
788	4	Short Term	5.4	7.6	5.2	5.4	6.1	+.7
		Long Term	4.6	5.2	5.6	6.0	6.5	+1.9
790	3	Short Term	9.3	9.4	7.9	8.8	8.4	-.9
		Long Term	9.6	9.4	9.4	9.4	9.4	-.2
793	5	Short Term	5.0	4.8	3.4	4.1	3.7	-1.3
		Long Term	6.9	6.7	6.0	6.2	6.5	-.4
797	5	Short Term	7.0	7.6	4.8	6.6	7.1	+.1
		Long Term	6.7	6.9	6.7	7.1	7.1	+.4

TABLE 1. (Continued)

Inst. Code	Type Code	Scale	1970-71	1971-72	1972-73	1973-74	1974-75	Change
799	4	Short Term	5.9	5.0	7.4	6.8	5.2	-.7
		Long Term	5.6	4.6	5.4	5.0	4.1	-1.5
815	3	Short Term	5.4	5.0	5.9	6.4	7.0	+1.6
		Long Term	6.9	7.7	7.9	7.7	7.8	+.9
825	3	Short Term	9.1	9.4	8.4	8.5	8.4	-.7
		Long Term	7.7	7.9	7.9	8.7	8.2	+.5
827	4	Short Term	9.1	8.0	4.7	5.4	4.3	-4.8
		Long Term	9.4	9.8	9.4	9.6	9.0	-.4
832	4	Short Term	5.7	6.0	5.7	6.4	6.4	+.7
		Long Term	4.0	4.2	4.8	5.6	5.3	+1.3
834	5	Short Term	6.1	9.4	8.8	5.4	6.4	+.3
		Long Term	7.7	8.1	8.3	7.7	7.3	-.4
836	4	Short Term	6.1	4.6	4.3	3.2	3.4	-2.7
		Long Term	3.7	3.7	4.2	3.5	3.7	0
837	3	Short Term	5.7	6.4	5.7	5.9	5.9	+.2
		Long Term	3.7	3.3	3.3	4.0	4.3	+.6
839	4	Short Term	6.7	8.0	8.6	7.3	6.8	+.1
		Long Term	3.5	4.0	4.8	4.0	4.1	+.6
841	5	Short Term	5.9	6.0	7.2	7.6	6.6	+.7
		Long Term	9.4	9.4	9.8	9.6	7.6	-1.8
842	4	Short Term	.2	1.0	1.4	1.7	2.0	+1.8
		Long Term	1.9	1.7	2.1	2.3	2.7	+.8
851	4	Short Term	2.2	3.0	2.9	2.9	2.7	+.5
		Long Term	3.3	2.9	3.1	2.5	2.4	-.9
853	3	Short Term	0	.2	1.0	1.2	.2	+.2
		Long Term	3.5	3.5	3.7	3.3	1.8	-1.7
857	4	Short Term	6.3	6.2	4.8	5.8	3.0	-3.3
		Long Term	4.0	5.0	5.6	4.4	4.7	+.7
858	4	Short Term	2.4	3.6	3.4	4.1	3.7	+1.4
		Long Term	8.5	8.5	8.5	8.7	8.6	+.1
863	2	Short Term	4.1	3.8	4.8	4.1	4.5	+.4
		Long Term	8.7	8.5	8.1	7.7	7.8	-1.1
864	2	Short Term	7.4	7.2	5.2	6.6	6.1	-1.3
		Long Term	5.8	5.4	4.0	4.6	4.1	-1.7

TABLE C 1. (Continued)

Inst. Code	Type Code	Scale	1970-71	1971-72	1972-73	1973-74	1974-75	Change
865	4	Short Term	8.3	9.2	6.7	7.6	7.5	-.8
		Long Term	7.9	7.7	7.5	7.7	8.0	+.1
866	4	Short Term	2.8	4.0	4.8	5.1	5.2	+2.4
		Long Term	3.5	4.6	5.6	5.2	5.9	+2.4
870	4	Short Term	9.8	10.0	9.0	9.3	9.1	-.7
		Long Term	7.9	8.1	8.3	8.1	8.4	+.5
873	4	Short Term	3.0	3.6	3.1	3.6	2.0	-1.0
		Long Term	5.4	5.2	4.8	5.0	4.7	-.7
874	1	Short Term	5.4	5.6	5.3	4.7	5.5	+.1
		Long Term	4.2	3.7	3.1	2.9	3.1	-1.1
882	2	Short Term	9.6	10.0	8.1	6.3	6.4	-3.2
		Long Term	7.7	7.9	7.3	6.9	6.7	-1.0

TME:kg

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